



The Harbinger

Newsletter of the Illinois Native Plant Society

SUMMER 2023
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"...dedicated to the study, appreciation, and conservation of the native flora and natural communities of Illinois."



Quad Cities Chapter exploring one of the many hidden gems near the Andalusia Gorge of the Mississippi River, Rock Island County. By Samantha Chavez.

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Message from the President

Happy Summer, everyone! I hope it's filled with growth and lots of flowers with few ticks and chiggers. In northeast Illinois, the flash drought has things in distress from observations at a recent Kankakee Torrent field trip at Thornton Woods June 10th. No one was sad to see the common motherwort in wilt.

As I am writing this, much needed soft rains are falling across our dry landscape releasing a glorious scent. The scent is a combination of ozone, petrichor, and geosmin. Look it up!

As we try to bring more member volunteers on to help the next phase of growth of the Society, some of you may be receiving letters asking you to become committee members at the state level. The commitment may run from an hour or two a week to whatever you want to devote to the project. Hours may vary.

I recently spoke to Jo Fessett, Executive Director of Illinois Audubon. Our most valuable asset, she said, is the botanical, land management/restoration skills, and experience growing native plants that our members hold. Audubon knows birds, but they envy our native plant know-how.

That know-how concerns me. Many organizations doing outreach and education create their own original content to promote their mission. I know of only one current informational brochure put together by the Central Chapter. I know of an old brochure on invasive plants and nice posters and hiking guides put together by Chris Benda and Chris Evans. But it seems we are not using our collective knowledge to its potential.

Where are the Illinois Native Plant Society bulletins on how to:

- Select a reputable native plant nursery?
- Select healthy plant material?
- Buy quality native plant seed?
- Find well qualified restoration worker/company?
- Control invasive species?
- Learn basic botany geared to all ages?
- Find high quality natural areas?
- Create a phenological study of native plants on your own property noting faunal associates over the growing season?

These are topics of interest expressed in many Facebook groups and in our survey comments. If you have writing talents listed on your member form, you will likely be receiving a letter this summer. If you are interested in contributing to such projects, send an email to me at illinoisplants@gmail.com.

Another item I want to touch on is a search for old hard copies of minutes of both state and the chapters. Having no brick or mortar, I fear our records may be jumbled. Or if they are in digital format, what is the format? Financial annual reports and other historical bits of information would also be of value. Please provide a brief list of the items and years covered. Eventually, we will need to find a location to archive this material.

If you know of or have such material, please contact the board at the above noted email address.

Janine Catchpole
President

Message from the Editor

This issue of The Harbinger was produced with the assistance of our new layout designer, Katie Kucera. Katie and I worked together with the Plants of Concern program at the Chicago Botanic Garden and now she is Ecologist at The Wetlands Initiative. I look forward to future collaboration. I'd also like to thank my spouse, Susan Barry, Instructional Designer and former English professor, who assists me by reading every word of every issue and making grammatical edits. It takes a team to do great work and I'm pleased with the quality of this newsletter over the years. Thanks to everyone else behind the scenes for all they do for the Illinois Native Plant Society and to our members who make it all possible.

Christopher David Benda - Editor

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Welcome New Members

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Laura Lenhart
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Chris Morris
Jodi Perko
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Samantha Berk
Anne Marie Bodrozic
DawnMarie Borders
Mary Cummings
Martha Delaney
Betsy Djamoos
Linda Valdez Karl and Bob Dynek
Mary Ann Esler
Laura Fox
Jeff Hoyer
Kayla Johnson
Karen Larson
Amy Martina
Jeanne McGowan
James McGuire
Virginia McHugh-Kurtz
Jennifer O'Reilly
Linda Pekelsma
Anthony Rubin
Laurie Ryan
David Schwaegler

NORTHEAST CHAPTER (cont.)

Katherine Smith
Monica Stokke
Marie Sutter
Jodi Trendler
Carolyn Villa
Oscar Villa
Brigid Zelko

QUAD CITIES CHAPTER

Stephen Hager
Stephanie Langley
Adriana McBride
Roberta (Robbie) Palm
Tracey Zahn

SOUTHERN CHAPTER

Seren Conner
Trisha Grohowski
Marion Molina
Susan Stripeik
Alyssa Zhan

AT LARGE

Ronald Fargen
Sarah Smith
Sonja Solomnson

Registration now open for the INPS Annual Gathering!

Hosted by the Central Chapter, the 2023 Annual Gathering is scheduled for **Friday evening, September 29; Saturday, September 30; and concludes on Sunday, October 1**. The gathering will be held at the State House Inn in Springfield, IL. We are thrilled that **our keynote speaker will be Dr. Doug Tallamy**, award-winning author, speaker, and Professor of Agriculture in the Department of Entomology and Wildlife Ecology at the University of Delaware. Dr. Tallamy will speak on the subject of his latest book, *The Nature of Oaks*.

An agenda, field trip descriptions, and registration details can now be found on our website at: illinoisplants.org/inps-2023-annual-gathering/

Announcing 2023 INPS Research Grant Awardees

Massi Jones (grad student) and Dr. Mary Ashley (faculty co-PI), University of Illinois-Chicago.
*How reproductively isolated is a population of *Asclepias tuberosa* in a fragmented remnant prairie?*

The tallgrass prairie once covered over 22,000,000 acres of Illinois. Degradation of prairie ecosystems began with the European settlement of North America and accelerated as agriculture and development increased, reducing the prairie to its current coverage of 2,000 acres. The remaining prairie consists of isolated and fragmented remnants. Such fragmentation limits gene flow into prairie remnants, which may lead to genetic drift and inbreeding, lower remnant population viability, and even local extinction. Genetic declines also limit a species ability to adapt to changing selection pressures. I will conduct a study of gene flow into and within a population of *Asclepias tuberosa* (butterfly weed), a native milkweed species that supports many pollinators and serves as a larval food plant of monarch butterflies. My study site is James Woodworth Prairie, a 5-acre remnant isolated within an urban matrix. Its isolation from other plant communities makes it an ideal location to study pollen mediated gene flow into a remnant prairie. I will combine DNA microsatellite genotyping and paternity assignment of individual plants and their progeny to assess gene flow and pollen dispersal into the prairie to determine the extent of reproductive isolation. I will also characterize pollen movement within the prairie. The unique pollination system of milkweeds, where pollen is delivered in a packet (pollinium) that likely fertilizes all the seeds in a flower, is expected to facilitate paternity assignment. My results will have important implications for conservation and restoration efforts of native flora.

Dan Marshalla (grad student) and Dr. Jennifer Fraterrigo (faculty co-PI), University of Illinois at Urbana-Champaign.

Functional diversity of forest understory plant communities across a gradient of fire history.

Fire activity is increasing in many areas throughout Illinois and globally, due to intensified fire weather from climate change as well as land managers better recognizing the benefits of fire for ecosystem management and biodiversity. However, maximum biodiversity is often found at intermediate disturbance levels, so high frequency fire regimes may be filtering species and traits out of the ecosystem. We will quantify biodiversity as functional diversity which considers variation of functional traits, characteristics that represent a species' response to and effect on ecosystem processes. Measuring functional traits also allows us to determine which ecological strategies of plants are most successful under various fire regimes. To better understand the direct

and indirect effects of fire history on the biodiversity of understory plants in southern Illinois forests, we will measure functional traits, functional diversity, and environmental variables along a fire history gradient. This study will improve our understanding of the effects of fire managements on biodiversity of understory plant communities, help identify optimal fire frequencies for functional diversity, elucidate which life strategies are selected for at different fire histories, improving our ability to maintain targeted plant populations, and aid predictions of understory plant community response to further environmental change.

Keegan McConnell (grad student), Southern Illinois University.

*Maintenance of species boundaries between *Triodanis perfoliata* and *Triodanis biflora* despite extensive hybridization.*

Biodiversity is extremely important to preserve species' interactions with each other and the environment, promote the longevity of a species, and encourage ecosystem multifunctionality. In short, many species depend on other species and a suitable environment in order to exist and perform important roles to support their ecosystem. Despite this, we have a poor understanding of species relationships in many organisms, especially plants. Hybrid zones have often been found to be important centers that promote biodiversity and are constantly changing areas of evolutionary and ecological proceedings for plants and any communities that depend on them. Within hybrid zones, species boundaries can be reinforced, maintained, or dissolved, and these processes have variable impacts on biodiversity. Being able to discern species boundaries between closely related groups of organisms is important to further our understanding of biodiversity and species' relationships. *Triodanis perfoliata* and *Triodanis biflora* are two closely related species. The mechanism responsible for maintenance of the species boundary between them, despite their extensive hybridization, is currently unknown. *Triodanis*, commonly known as Venus' Looking Glass, is a genus of annual eudicot herbs with seven native species in North America. The focus of this study is the two most cosmopolitan species, *T. perfoliata* and *T. biflora*, that hybridize frequently over large areas of North America. This study aims to determine what is maintaining the species boundary between these two groups, via morphometric and DNA analysis.

Will Overbeck (consultant, Hey and Associates, Inc.) and Derek Ziomber (citizen scientist, North Branch Restoration Project, co-PI).

Floristic inventories of Upper and Lower Des Plaines River nature preserves to assess woodland and grassland ecological gradients for discovery of indicator species and characteristic local plant community composition.

A floristic study is planned at five sites within the Des Plaines River watershed in Cook County and Lake County, Illinois, examining grassland and woodland conservation areas that serve as reference sites containing remnant natural communities of native plants. The Des Plaines River flows south-southwest for 95 miles in Illinois, through the Northeastern Morainal and Chicago Lake Plain Natural Divisions, forming the Illinois River at the confluence with the Kankakee River. Permitted floristic inventories at Wadsworth Prairie and Grainger Woods will be coordinated with the Forest Preserve District of Lake County, while surveys at Paw Paw Woods, Cap Sauers Holding, and Cranberry Slough will be coordinated with the Forest Preserves of Cook County. The study aims to inventory and analyze plant communities in the Upper and Lower Des Plaines River corridors to update previous studies and better understand patterns of plant community composition in ecological gradients, while identifying characteristic native indicator species, adventive native and non-native species, and invasive species that threaten the stability of natural areas. Plant communities known to occur in the study areas include dry-mesic upland forest, mesic floodplain forest, northern flatwoods, dry-mesic to wet-mesic prairie, and marsh. Other similar plant communities may be described and compared with the Illinois Natural Areas Inventory Community Classification System. Applications of updated floristic inventories can be used to assess the presence of recently adventive plant species, current trends in the persistence of conservative native plant species, and in evaluating conservation priorities for landscape preservation in northeastern Illinois.

Rory Schiafo (grad student), Chicago Botanic Garden/Northwestern University.

Understanding the competitive interactions between species used to restore oak woodlands: The importance of light availability and species' arrival order.

Oak woodlands support high amounts of plant biodiversity throughout Illinois. However, these ecosystems have been degraded by land use changes, fire suppression, and invasive species. While invasive species removal and reintroducing fire are common practices to restore woodlands, these actions are typically insufficient to restore herbaceous diversity. Instead, restoration typically relies on the addition of native plant species through seed. However, getting these seeds to establish and persist can be challenging. The competitive interactions between species are likely to impact which species will survive in a restoration, but our understanding of how species in seed mixes compete remains limited. The outcomes of these competitive interactions are likely dependent on the amount of light availability at the restoration site, as well as the order in which species are added to a site. In this study, I will test how the species in seed mixes used to restore woodlands compete with each other, and how the amount of light resources and the order of species' arrival may impact these competitive interactions. At the Chicago Botanic Garden, I will grow 180 experimental plant communities that contain 12 plant species found in local seed mixes. I will grow these communities in three different light environments and manipulate species' order of arrival to investigate how competitive interactions change with light availability, and arrival order. This work will increase our understanding of the processes influencing the establishment of seeded species in oak woodland restoration, which will serve to inform future seeding practices in this threatened ecosystem.

Thanchira Suriymongkol (grad student) and Dr. James Zaczek (faculty co-PI), Southern Illinois University.

Assessing the Relationships between Forest Cover and Canebrakes in Illinois: Implications for Management.

Giant cane (*Arundinaria gigantea*) is one of the three native woody bamboo species that occurs in the United States. Their distribution extends across 22 southeastern states, by which Illinois lies within the most northern portions of their range. Giant cane was an important part of the Native American livelihood, providing numerous cultural and ecological benefits. Giant cane often forms a dense monotypic stand called a "canebrake". Canebrakes serve as a potential riparian buffer species and wildlife habitat. Historically, giant cane covered a vast area of the southern U.S. However, due to land conversion and anthropogenic influences on the landscape, giant cane currently occurs in <2% of its original distribution. Giant cane is listed as a critical species and is a conservation target designated by The Nature Conservancy of Illinois. In addition, enhancement of canebrake habitat is an important habitat management goal identified by the Cache River Wetlands Joint Venture Partnership. Therefore, appropriate and effective management actions are needed to restore the species. Our objective is to locate additional giant cane canebrakes in southern Illinois and characterize canebrake growth, vigor, and overall health in relationship with associated forest cover characteristics. Data from this study will be used to develop management recommendations for the restoration and rehabilitation of canebrakes in southern Illinois and the Lower Mississippi Alluvial Valley.

Announcing 2023 INPS Survey Grant Awardees

Chris Benda (staff, Plants of Concern–Southern Illinois)

*Existence Surveys for Few-flowered Nutrush, *Scleria pauciflora*, in Illinois.*

Scleria pauciflora is a perennial monocot in the Cyperaceae that inhabits dry soil in full sun. It is currently listed as state endangered and IDNR supplied a list of 19 occurrences, mostly in extreme southern Illinois, as well as Kankakee, Lee, and Will counties. These surveys also present the opportunity to survey for other *Scleria* species in Illinois and might lead to a publication updating the status of the genus in Illinois. This species is easily

distinguished from other *Scleria* species in Illinois by its papillose achenes. A comprehensive survey is recommended to ascertain the status of this species in Illinois because there might be many healthy, sizable, and protected populations in Illinois to warrant delisting. There are more sites to survey than the funding from the survey grant can cover, so funding will be supplemented by the Plants of Concern program, a community scientist rare plant monitoring program that is a partnership between the Chicago Botanic Garden and Southern Illinois University. This funding is critical to ensuring a comprehensive survey for this species is conducted because there is high probability a review of this scope will reveal data that supports delisting this species in Illinois.

Brian Charles (staff, Illinois Natural History Survey)

Surveying high-priority historic plant and pollinator records in Illinois' sand areas.

Illinois' sand areas contain unique flora and fauna, including many threatened and endangered species. However, many records and entire species which inhabit these areas are historical in the state. We seek to survey sand areas in central and north-central Illinois and will look for the following plants, which are entirely historical: *Artemesia dracunculus*, *Botrychium multifidum*, *Botrychium simplex*, *Chimaphila umbellata*, *Lycopodiella inundata*, *Schoenoplectus purshianus* and *Scleria muehlenbergii*. We also seek to simultaneously survey for select rare bee fauna, which are extremely under-surveyed in sand areas and Illinois in general. By consolidating our surveys to areas with high concentrations of both historic plants and rare bees, we will maximize our contribution to our current understanding of Illinois flora and fauna.

Noah Farris (independent researcher and community scientist, Plants of Concern–Southern Illinois)

*Seeing the Forest, Despite the Trees: An Automated Approach to the Botanical Surveying of *Asplenium bradleyi*.*

In order for contemporary science-based conservation surveying efforts to keep pace with an ever-lengthening range of myriad and multifaceted challenges, as with any scientific discipline, innovation is required. Rare flora often inhabit complex environments and terrains, which necessarily complicate manual surveying strategies and provide a uniquely demanding opportunity for automation. Drones offer an emerging technological solution to augment surveyors' current abilities, in many cases providing a faster, safer and more efficient method to conduct surveys. Such technology has received widespread scientific acclaim in recent years, successfully completing numerous high profile conservation objectives such as finding and collecting critically endangered cliff-dwelling plants in Hawaii. Similarly, *Asplenium bradleyi* is a rare, epipetric fern endemic to Southern Illinois that inhabits small crevices in exposed sandstone cliffs, which make it an ideal case study for testing and applying drone technology. In this study, the PI will work closely with Plants of Concern–Southern Illinois experts to identify and survey all known subpopulations of *A. bradleyi* using state-of-the-art consumer drone technology to augment manual surveying efforts and demonstrate the technology's capabilities and widespread applicability for future surveying purposes. By engaging the drone's advanced 360° obstacle avoidance system, GPS or computer vision-based navigation systems, and high-resolution camera, surveyors have the choice to operate the drone manually, semi-autonomously, or, in perhaps a completely novel use of the technology, fully autonomously, to image and map populations of rare plants while simultaneously navigating through dense forest understory, or alongside cliffs, without human intervention.

Chapter News

For information about each chapter, visit our website at
illinoisplants.org/chapter-locations

INPS Research Grant Report

By Samantha Berk, 2022 Research Grant Recipient

Understanding the relationship between biodiversity and ecosystem function (BEF) is an important effort in ecology that helps predict impacts of land management. Land managers are often looking to diversify and enhance the productivity of prairies, and as someone interested in prairie conservation it occurred to me that approaching plant community analysis with a different lens could benefit how restorations are managed. As they are the namesake of tallgrass prairies, I decided to research biomass production, a critical ecosystem function, through the lens of graminoids.

Graminoids drive multiple key ecosystem processes like nutrient cycling and decomposition, and therefore impact ecological function across ecosystems. As any good ecologist would do, I then sought to make my research more insightful by complicating things. I wanted to know if plant functional characteristics like photosynthetic pathway or native status drove the influence of graminoids on biomass production. Since no two prairies are alike, I was also curious if this relationship changed in prairies with differing functional diversity, or the variation of traits directly influencing a community's performance.

Thanks to the 2022 INPS Research Grant Award, I was able to explore the underlying mechanics of biomass production on a fine scale. I investigated how the ratio of graminoids to forbs, the ratio of C4 graminoids to C3 graminoids, and the ratio of native graminoids to non-native graminoids affect community biomass across a range of functionally diverse prairies. An ambitious project for a new ecologist, yes, but I was eager to tackle it. With the help of my wonderful Evidence-based Restoration Lab colleagues, I collected the bulk of my data from vegetation surveys and biomass harvests from 190 permanent plots across Nachusa Grasslands Preserve.





After months of analysis, I found that among relatively diverse prairies there is no evidence to suggest community biomass is impacted by different ratios of graminoids, their photosynthetic pathways, or their native status. I also found that prairies with higher functional diversity tended to produce slightly more community biomass. However, my study was not able to explore how or why this relates to graminoid presence. Given that graminoids influence other ecosystem functions, I was surprised to see little association with community biomass at this fine scale.

Altogether, the results suggest there are more important drivers of community biomass production than those I investigated, and that managers who plant for high diversity may not need to be concerned with these elements of community composition when restoring prairies. This project improves our understanding of BEF in prairie restorations and provides a new interpretation of plant community dynamics from graminoid-specific lenses.

Graminoids are understudied within prairie research, so studies like my own looking at their role are important to understanding ecosystem function as a whole. This is important to native plant conservation because the more we understand the outcomes of restoration, the more empowered managers are in making informed decisions and effectively conserving native flora and communities. In addition to the research and practical implications, I've become enamored with graminoids and functional traits as a result, pushing me to continue studying restoration ecology. I have no doubt that sharing these results and broader impacts will also convince researchers, managers, and the public that functional traits and graminoids deserve the limelight.

The Rare *Carex umbellata*

By Linda Curtis, AKA Lindaeus

One of the reasons the short tufts of *Carex umbellata* are seldom seen is because you are standing on them.

A small tuft of sedge leaves is easily overlooked, especially if a morel mushroom is next to it. I discovered *C. umbellata* in the Lake Michigan Zion Beach-ridge plain while “belly botanizing,” taking a photo of a morel mushroom. As I pushed the grass-like leaves away to get the uncluttered photo, the small seed head of perigynia and tiny staminate spike came into focus.



The seed heads occur at the base of the tuft and are much shorter than the narrow leaves, less than 6 inches tall. Something else peculiar was a hole that went under the tuft with ants marching in and out. I later discovered in *Flora of the Chicago Region* (Wilhelm and Reicher 2017) that the roots of Umbrella Sedge were a nest rooftop for the ant genus *Formica inserta* that live below the leafy tuft. Its former name of Umbrella Sedge could be changed to Roof Rafter Sedge.

The ants climb into the grass-like tuft to find the culms with a seedhead, then chew into a perigynium and eat the stipe of the seedlike achene inside. In other ant-sedge associations, the stipe is chewed off and the entire achene taken back down into the root chamber to the young ants in their incubation nursery.

The newer common name of Early Oak Sedge gives us a clue to its early phenology. The stamens and stigmas of the flowers bloom in April, before most other sedges, and the perigynia mature in May, offering an abundant food source for so many invertebrates. Similar to *C. tonsa*, *C. umbellata* has a shorter perigynium beak with red scales longer than their ellipsoid perigynia.

Linda W. Curtis, AKA Lindaeus, is author of the *Bog-Fen Carex of the Upper Midwest*, now 2nd edition on [Amazon](#). Google “crazy botanist rare plants” for a recent article.

Sedgeapalooza 2023

By Christopher David Benda

This one's for the sedgeheads! That is, people who enjoy seeking out and identifying sedges. Sedges are grass-like plants in the family Cyperaceae. They are important because they comprise the dominant vegetation in nearly every native plant community in Illinois and beyond. However, to the average person, they just look like grasses.

The distinction between sedges and grasses is probably uninteresting to most lay people: sedges (Cyperaceae) have one bract called a scale under each flower/fruit; grasses (Poaceae) have two bracts called lemmas under each flower/fruit, and rushes, which are also grass-like, have six bracts called tepals under each flower/fruit. But to plant lovers, sedges, particularly those in the genus *Carex*, are fascinating and challenging plants to identify in the field.

There is also tremendous diversity within the *Carex* genus, with around 200 species native to Illinois. In early June of 2019, the Illinois Native Plant Society held the first “Sedgeapalooza” in southern Illinois, which is an effort to find and identify as many species as possible in the genus *Carex* in a single day. That year, 50 species were observed by a small group of enthusiasts, including INPS board members, Paul Marcum and Nick Seaton. In early June of 2023, a small group of enthusiasts gathered again to “get sedged” and managed to find and identify 47 species in the genus *Carex* across southern Illinois in Jackson, Union, Pulaski, and Johnson counties.

This year I was joined by fellow sedgeheads Clarice Esch, Abel Kinser, Jenny Lesko, and Nick Seaton. We started the day in the woods near my house in Makanda, Illinois. I live on 400 acres in a private country club, which has been in existence for 100 years, so much of the land is in a natural state with forests, open grassy areas, and



wetlands. We literally sat for an hour on the trail in the woods across from my house where we found common woodland species such as *Carex blanda*, *Carex glaucoidea*, *Carex amphibola*, *Carex jamesii*, *Carex retroflexa*, *Carex hirsutella*, *Carex leavenworthii*, *Carex radiata*, *Carex albicans*, *Carex normalis*, and *Carex digitalis*. Then, we proceeded to an open, grassy area near an artificial pond and found *Carex festucacea*, *Carex swanii* (pictured left), *Carex lurida*, *Carex aureolensis*, *Carex frankii*, *Carex granularis*, *Carex vulpinoidea*, *Carex gravida*, *Carex davisii*, and *Carex crinita*. The excursion at this site culminated with observing *Carex willdenowii*, a state

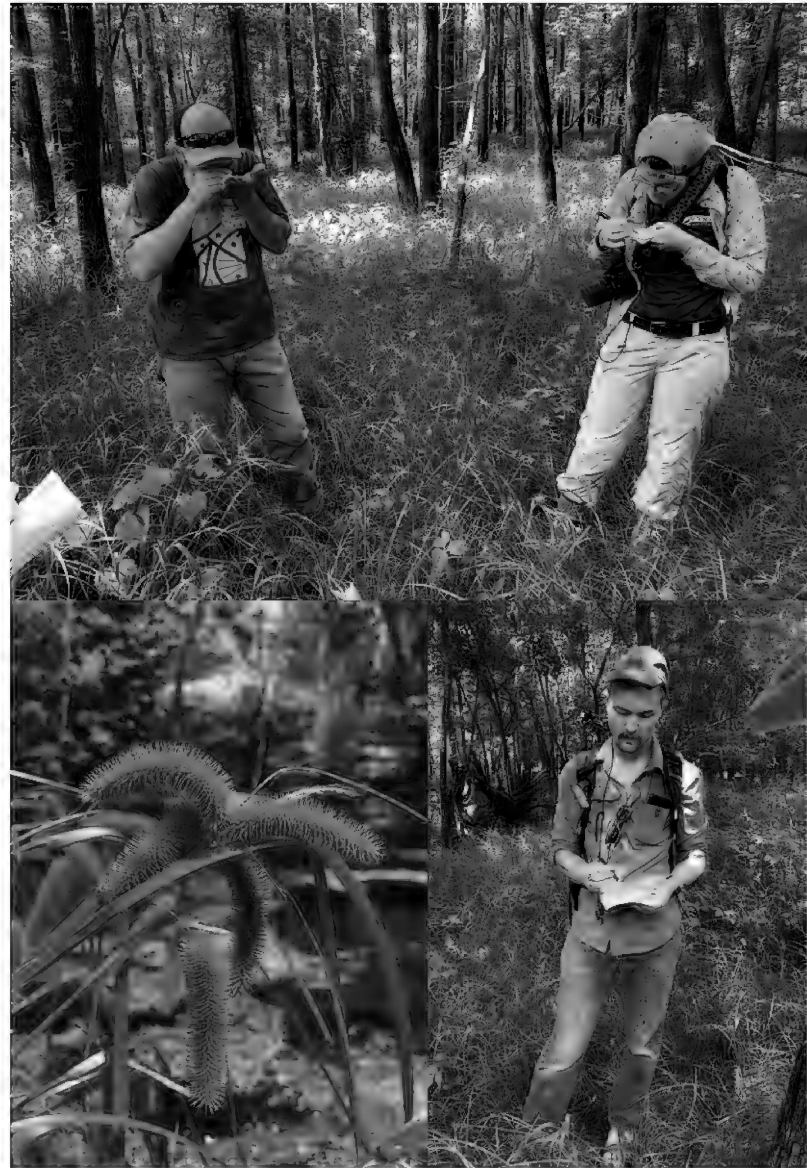
Carex swanii

threatened species several people in the group had never seen before. Satisfied having found 22 species of *Carex*, we continued to the next site.

We departed for Snake Road at LaRue Pine Hills where we knew we would find some rarities. Along the way, we pulled over along Scatters Road to observe a huge patch of *Carex grayi* and ended up finding seven other species there as well, including *Carex corrugata*, *Carex shortiana*, *Carex conjuncta*, *Carex cruscovi*, *Carex hyalinolepis*, *Carex stipata*, and *Carex tribuloides*. We continued down Snake Road to Big Spring, where we saw *Carex comosa* (pictured right) and *Carex decomposita*, a state endangered species.

We had a general plan for the day but decided to call an audible and head to Ozark Hills Nature Preserve on our way to Cypress Creek National Wildlife Refuge. There, we knew we would find *Carex albursina* and *Carex careyana*, increasing our total to 34 for the day.

Abel Kinser and Clarice Esch looking at segdes



Carex comosa

Nick Seaton taking notes

Then it was down to Cypress Creek National Wildlife Refuge along Butteridge Road in Pulaski County. Right next to our vehicles, where we parked along the road, was the next sedge for the day, *Carex squarrosa*. As we walked down a grassy trail, we stumbled and found *Carex caroliniana*. But the ultimate destination at this site was a high-quality floodplain forest and swamp. There we encountered *Carex muskingumensis* and *Carex typhina*, among other rarities like *Carex intumescens* (state threatened), *Carex gigantea* (state endangered), and *Carex lupuliformis*. The latter two species had immature achenes, which are helpful for identification, but I had previously observed these species at this location so I was confident of their identification.

Next, we went to the last site we had planned for the day, the Lower Cache River Boat Access. Here we knew we would find *Carex reniformis*, state endangered and a county record occurrence found by Abel Kinser a few years ago, and *Carex socialis*,

also state endangered and described as a new species in Illinois by Dr. Robert Mohlenbrock and John Schwegman. While looking for these rarities, we also found *Carex cephalophora* and *Carex oxylepis* var. *oxylepis*, bringing the total up to 46 species for the day. It was getting late, but we thought long and hard about additional species we could find along the way back home. Abel said he had a point on iNaturalist for *Carex lousianica* nearby at Faulkner Tract. We went there and quickly found some, increasing the final total for the day to 47 species.

We all felt like it was a great effort to find all these species in a single day, especially with a loose plan of action. However, we considered the species that we didn't encounter but could easily see that time of year with more planning and came up with about a dozen. Perhaps it will become an annual event, even one we could promote statewide!

*Carex davisii**Carex willdenowii**Carex granularis*

Other News, Articles, Web Links, & Videos

2023 is the 60th anniversary of the Illinois Nature Preserves Commission

legislation! Multiple hikes are planned at Nature Preserves across the state for the weekend of August 26-28, with a signing ceremony planned for August 28 at Illinois Beach State Park. Find out more: friendsofillinoisnaturepreserves.org/inps-weekend



Cyperaceae & Juncaceae Identification Workshop in the Mississippi River Valley

July 19-21 in Davenport, IA • tinyurl.com/July2023-IDWorkshop-Sedges



New taxonomic treatment of violets in the northeastern U.S. and adjacent Canada

in the Journal of the Torrey Botanical Society
By Harvey E. Ballard Jr, John T. Kartesz, and Misako Nishino

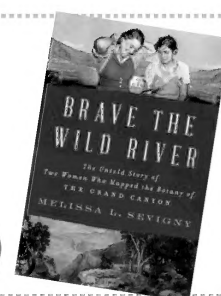
<https://doi.org/10.3159/TORREY-D-22-00029.1>



In the book *Under Prairie Skies*, C. Thomas Shay asks and answers the question, **What role did plants play in the lives of early inhabitants of the northern Great Plains?** Since humans arrived at the end of the Ice Age, plants played important roles as Native peoples learned which were valuable foods, which held medicinal value, and which were best for crafts. Read more: tinyurl.com/UnderPrairieSkies



Brave the Wild River by Melissa Sevigny is a spellbinding adventure of two women who risked their lives to make an unprecedented botanical survey of a defining landscape in the American West, at a time when human influences had begun to change it forever. Read more: tinyurl.com/BraveTheWildRiver-Norton



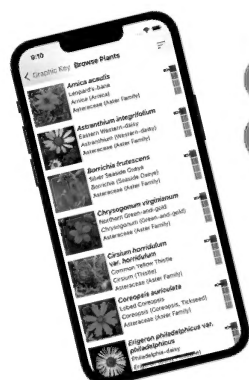
From the blog *Strategies for Stewards: from Woods to Prairies*, read **Blunt Answers to Nine Questions about Saving Oak Woodlands**, by Christos Economou, Matt Evans, Eriko Kojima, and Stephen Packard: tinyurl.com/SavingOakWoodlandsStrategies



Volunteer finds rare parasitic plant in Wisconsin for the first time in over 40 years.

A few stems of clustered broomrape found last June near Lake Michigan highlights work of rare plant monitoring volunteers. Read the article:

tinyurl.com/RareWisconsinPlantFind



Check out the new FloraQuest website and smartphone app! Go to FloraQuest.org to learn about the project, lead by botanist Alan Weakley and team at the University of North Carolina Herbarium and the North Carolina Botanical Garden. Plus, read a recent article about the background and goals of the Southeastern Flora Project and the app: "[FloraQuest app puts a botanist in your pocket.](#)"

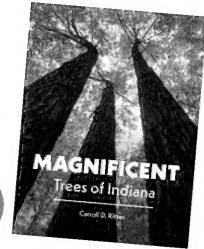




Follow Dr. Robert Mohlenbrock and his son Trent as they document their plant finds in southern Illinois on Instagram [@si_roadsidebotany](https://www.instagram.com/si_roadsidebotany)



In this webinar hosted by Indiana Forestry & Woodland Owners Association, author **Carroll Ritter** shares pictures and stories from his book *Magnificent Trees of Indiana*. Watch the webinar: <https://youtu.be/u6A0kDyO5J0> and check out the book: tinyurl.com/MagnificentTreesOfIndiana



Botany Humor



Accidentally
summoning
a demon whilst
practicing your
Botanical Latin



Making the
demon identify
grasses and
sedges for you



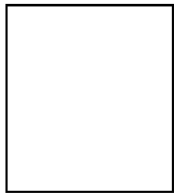
ILLINOIS NATIVE PLANT SOCIETY

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The Harbinger Summer 2023

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